Abstract of the Disclosure

A program development support apparatus includes a CPU, event detection section, trace data generation section, and trace memory. The CPU executes a target program and outputs instruction address/instruction code data. The event detection section asserts and outputs a section trace start signal upon detecting that the instruction address/instruction code data matches a predetermined instruction address or instruction code set as an event condition in advance. When an instruction code of the instruction address/instruction code data is a branch instruction, or the section trace start signal is active, the trace data generation section outputs an uncompressed instruction address as trace data. When the instruction address is not the branch instruction, and the section trace start signal is not active, the trace data generation section generates a plurality of compressed instruction addresses by compressing the instruction address and then combines the compressed instruction addresses and outputs them as the trace data. The trace memory stores the trace data from the trace data generation section.